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**OPERATING AND SUPPORT
COST REDUCTION (OSCR)**

A BASIC GUIDE FOR ARMY MANAGERS

Warren H. Gille, Jr.

May 1992



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<p>This publication provides managers with essential information concerning the Operating and Support Cost Reduction (OSCR) Program. It summarizes the basic methodology, procedures, and data sources, and provides additional resources for program implementation. In addition, it lists points of contact and reference materials for future use. It provides an overview of the OSCR program, as established at an AMC major subordinate command.</p>					
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FOREWORD

This guide was written to provide managers with essential information concerning the Operating and Support Cost Reduction program. It summarizes the basic methodology, procedures, and data sources, and provides additional resources for program implementation. In addition, it lists points of contact and reference materials for future use.

Most importantly, in just a few pages, it provides an overview of the OSCR program at TROSCOM.



RALPH CRAWFORD
Acting Chief, Analysis Division

OPERATING AND SUPPORT COST REDUCTION

Table of Contents

	<i>Page</i>
I. Introduction to Operating and Support Cost Reduction	1
A. Purpose	1
B. General Description of the OSCR Methodology	1
C. Choosing and Nominating Candidates	3
D. Funding for OSCR Candidates	4
II. Identification of Operating and Support Costs	5
A. Typical Cost Elements	5
B. Publications which Define the Rules for Preparing Operating and Support Cost Estimates	5
III. Assistance and Guidance for the OSCR Program	6
A. HQ, Department of the Army	6
B. HQ, U.S. Army Materiel Command	6
C. HQ, U.S. Army Troop Support Command	7
IV. OSCR Study and Advisory Groups	7
A. AMC OSCR Task Force	7
B. AMC TI Process Action Team	7
V. General Reference Materials Concerning OSCR	8
A. Documents and Publications	8
B. Models and Software Products	10
C. Other Resources	12

OPERATING AND SUPPORT COST REDUCTION (OSCR)

I. Introduction to Operating and Support Cost Reduction

A. Purpose

Operating and support costs consume more than fifty percent of the U.S. Army budget. Due to reductions in the Federal budget, and austere times for defense spending in particular, the Department of the Army has established a program for reducing costs in the area in which it spends the majority of its funds. The program is entitled Operating and Support Cost Reduction (OSCR). This guide provides basic information about the program and how it operates.

B. General Description of the OSCR Methodology

Operating and Support Cost Reduction is an issue which has surfaced many times in recent decades. Most recently, OSCR became a formal program under a joint TRADOC-AMC tasker signed by General Thurman of TRADOC in December 1988. Ultimately, responsibility for overseeing the program was assigned to the LTG at CASCOC and to DCG for RDA at AMC. The basic activities which produce OSCR savings are captured by the acronym DTLOM. It stands for Doctrine, Training, Leader Development, Organization, and Materiel. To illustrate, each of these activities is defined below by example.

Under the DTLOM, TRADOC and HQ AMC are assigned the following areas of responsibility:

TRADOC RESPONSIBILITIES

<u>Name</u>	<u>Typical Examples</u>
Doctrine	Battlefield Spares System Stockfunding of Depot Repairables
Training	Distributed Training Program

OPERATING AND SUPPORT COST REDUCTION (OSCR)

TRADOC RESPONSIBILITIES -- Continued

<u>Name</u>	<u>Typical Examples</u>
Leader Development	Consolidation of Logistics Officers Advanced Courses
Organization	MARC, BOIP, and TO&E Development

AMC RESPONSIBILITIES

<u>Name</u>	<u>Typical Examples</u>
Materiel	OSCR for Materiel Systems <i>Tech Base, Materiel Change Value Engineering, Mods, and Technology Insertion.</i>

From the point of view of the U.S. Army Materiel Command and the Major Subordinate Commands (MSC's) which service it, the OSCR program is essentially an investment program in which materiel that is experiencing excessively high operating and support costs is identified, evaluated, and improved. It is different from standard improvement programs, in that reduction of O&S cost, not improvements in performance or readiness, is the goal.

The materials above have been adapted from those developed by Mr. Howard E. Burnette, Jr., CASCOT, Ft. Lee Virginia.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

C. Nominating and Processing Candidates

Approximately twice per year, AMC Headquarters tasks the OSCR focal point at each Major Subordinate Command to survey the Product Managers, Project Officers, and Item Managers to develop a list of candidate systems for the OSCR program. Identification of candidates by the PM's and other managers may not always be an easy task. Some systems may be easy to identify because they are "eating our lunch". However, systematic techniques using system performance and consumption data may be necessary to find good candidates among numerous alternatives.

Once this list of candidates is assembled, Cost Analysis personnel review the list of proposed candidates, assist in preparing, and validate the preliminary economic analyses that each proponent must submit to substantiate projected cost savings. These preliminary economic analyses capture the vast majority of costs and benefits and provide the statistical data for ranking the OSCR candidates. These validated packages are forwarded to higher headquarters which reviews them before presenting them as candidates to the OSCR Proponency at HQ DA.

If a candidate is chosen for implementation, it is returned to the Cost Analysis organization at the proponent's MSC so that a complete economic analysis can be performed. This provides for a double check on cost savings, savings to investment ratio, and for setting up an analytical framework for tracking costs and savings over time.

Candidates for Technology Insertion are handled somewhat differently, even though some of the procedures are the same. It is best to contact the TROSCOM TI manager listed elsewhere in this document if you feel that you have a candidate which qualifies for TI consideration.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

D. Funding for OSCR Candidates

Funding for OSCR candidates has been an element of controversy in policy discussions for some time. A brief summary of the current situation follows:

A primary concern for the OSCR program has been --

Where will the funding for OSCR candidates come from?

The answer so far is --

It will be apportioned from the funding the Project Manager or proponent MSC already has.

APPORTIONMENT SCHEDULE

<u>Type of OSCR Candidate</u>	<u>Source of Funds</u>
Tech Insertion through Stock Fund	1% of MSC FY Stock Fund Obligation Authority
Value Engineering	1% of VE Program Funding
Minor Modification	20% of all FY 6.7 and procurement minor mod funds
Major Modification	PM financed, or if too large enter budget cycle
Tech Base (Basic R&D)	4% of MSC FY R&D Obligation Authority

At the present time, there is, in general, no "new money" set aside for OSCR.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

II. Identification of Operating and Support Costs

A. Typical Cost Elements

Operating and support costs must be identified and measured when submitting the documentation for an OSCR funding candidate. Some of the more important cost elements which fall under Operating and Support Cost are listed below:

Military Personnel

Replenishment Spares

Petroleum, Oils, and Lubricants

Unit Training Ammunition/Missiles

Depot Maintenance

Modifications, Materiel

Maintenance, Civilian Labor

Personnel Replacement

B. Publications Which Define the Rules for Preparing Operating and Support Cost Estimates

The definitions for the cost elements listed above, and for other operating and support cost elements, are provided in the following Army publications:

DA Pam 11-X, Guide for Cost Analysis, currently in draft.

DA Pam 11-4, Operating and Support Cost Guide for Army Materiel Systems, published in 1976, laid the foundation for O&S costing. It presents O&S Cost as one of three cost categories, along with R&D and Investment Costs, as the components of life cycle cost.

DCA-P-92(R), Instructions for Reformatting the BCE/ICE, published in 1984, reformatted the methodology of the older DA Pam series into five cost categories from three. Under

OPERATING AND SUPPORT COST REDUCTION (OSCR)

the reformatting, the cost categories are Development, Production, Military Construction, Fielding, and Sustainment. Although some categories do not crosswalk perfectly, Operating and Support Cost in the three factor method is almost identical to the pair of categories called Fielding and Sustainment in the five factor method.

Either method may be used to compute O&S costs. The five factor method is currently the more popular, and is used in the HQ AMC Operational Baseline Cost Estimate (OBCE) software package.

III. Assistance and Guidance for the OSCR Program

Several offices at different levels can assist in the preparation, development, and implementation of OSCR candidates. They are listed below, with a brief description of their duties or functions.

A. Headquarters, *Department of the Army*

O&S Cost Reduction Proponency

Mr. Keith Charles

*Deputy Assistant Secretary of the Army
for Plans and Programs*

B. Headquarters, *U.S. Army Materiel Command*

O&S Cost Reduction Task Force

Mr. Dan Marks

*Chief, AMC OSCR Task Force
DSN: 284-3094 AMCRD-AR*

Serves as administrator for AMC OSCR program. Directs AMC OSCR Task Force activities which include interface with HQ DA for OSCR policy and submissions. Organization also provides matrix support and serves as coordinator of the OSCR program Army-wide.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

C. Headquarters, U.S. Army Troop Support Command

O&S Cost Reduction Program

Mr. Warren Gille
TROSCOM OSCR Focal Point
DSN: 693-3133 AMSTR-RNO

Serves as TROSCOM POC with higher headquarters and other commands. Surveys TROSCOM to locate quality OSCR candidates for implementation. Provides documents, guidance, and educational information to command managers to implement the OSCR program. Serves as a member on development teams and study groups.

Mr. Howard Mueller
TROSCOM Technology Insertion (TI) Manager
for O&S Cost Reduction
DSN: 693-9387 AMSTR-MEAA

Serves as Technology Insertion POC for TROSCOM. Initiates TI projects and serves as administrator for their development. Provides TI project data to OSCR project focal points. Coordinates with HQ AMC TI team leader to disseminate TI policy.

IV. OSCR Study and Advisory Groups

A. AMC OSCR Task Force **Coordinates OSCR program Army-wide**

Dan Marks, Chief
HQ AMC AMCRD-AR DSN: 284-3094
POC's: LTC I.P. Barlow / Major Brian Whiting

B. AMC TI Process Action Team

Mr. Rick Uldrich, Team Leader
HQ CECOM AMSEL-ED-TI DSN: 992-2291

OPERATING AND SUPPORT COST REDUCTION (OSCR)

V. General Reference Materials Concerning OSCR

A. Documents and Publications

Several documents and publications are available which describe OSCR, its methodology, and procedures. A list of some of these and a summary of their content follows.

1. AMC Science Board Summer Study on Operating and Support (O&S) Cost Reduction. (Aug 90).

Presents a synopsis of the findings of the Army Study Group which concluded that the Army needed a renewed OSCR effort.

2. Weapon System Cost Estimating - Fielding and Sustainment. (17 Jul 90).

A briefing given by Ms. Kathy Dymecki of TACOM to GEN Tuttle, Commander AMC, and other high level officials, which examines O&S costs, what they are, how they are measured, data sources, and various computational methods.

3. Operating and Support Cost Reduction (OSCR).

An AMC White Paper produced with various dates, most recently June 1991. The twelve pages of text read like a journal article. A considerable amount of time is spent detailing the six methods for implementing OSCR. Eighteen charts illustrate using examples and different types of equipment.

4. Draft DA Pam 11-2, Guide for Economic Analysis.

The comprehensive guide to the preparation of economic analyses including methodology, examples, formulas, sample problems, and definitions.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

5. Guides for Calculating O&S and Other Costs.

The DA Pam Series 11-2 thru 11-4 were published in 1976. The DCA publication is dated 1984. They are listed below with their popular titles.

Three factor method for computing life cycle costs.

DA Pam 11-2, Research and Development Cost Guide.

DA Pam 11-3, Investment Cost Guide.

DA Pam 11-4, Operating and Support Cost Guide.

Five factor method for computing life cycle costs.

DCA-P 92(R), Instructions for Reformatting the
BCE/ICE.

Revised five factor method for computing life cycle costs.

Draft DA Pam 11-X, Guide for Cost Analysis.

6. Technology Insertion - Operating and Support Cost Modeling Handbook, (May 1992)

This handbook was developed by Mr. Patrick Nunez of Cost and Systems Analysis Directorate, TACOM. It contains two sections. Section one discusses OSCR for Technology Insertion and the three stages of cost estimating. These include the preliminary analysis, validated economic analysis, and tracking. Section two presents a description of the preliminary analysis model developed by the O&S Cost Modeling Subgroup of the AMC TI Process Action Team, listed under V.B.1. below.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

7. CM 90-18, TROSCOM Data Source Handbook.

A fifty-four page document which catalogs the data sources used by TROSCOM Cost Analysis personnel. It includes a complete chronological list of cost studies by subject (1977-1991). The handbook also provides a list of contacts at other MSC's, data sources at various Army installations, and information concerning research organizations.

8. CM 90-01, Fundamental Concepts of Cost-Benefit Analysis.

This twenty-three page handbook outlines the basic concepts of cost and economic analysis in layman's terms. It was originally written for an elementary class in Total Quality Management, so no previous experience in the subject matter area is required.

9. CM 90-08, Handbook of Army Cost Analysis Terms.

A fifty page dictionary of terms used in cost and economic analysis.

B. Models and Software Products

1. Methodology for Ranking of Technology Insertion (TI) Candidates for Operating and Support Cost Reduction (OSCR). (March 1991).

This ten page document specifies the computer model designed by the O&S Cost Modeling Subgroup of the AMC TI Process Action Team in Lexington, Kentucky in the spring of 1991. The model performs a limited or preliminary analysis of candidates in order to screen out unproductive ones and ranks them according to Savings-to-Investment Ratio (SIR). Although the model is not universal in application,

OPERATING AND SUPPORT COST REDUCTION (OSCR)

it applies in a number of situations which occur when developing Operating and Support Cost Reduction candidates. This model has been programmed and used successfully in a variety of common PC languages by AVSCOM, CECOM, and other MSC's.

2. TICE

Technology Insertion Candidate Evaluation Model.
Booz, Allen, & Hamilton, Inc.
Huntsville, Alabama 35806 (1991-1992).

This PC based model was developed using the equation set presented in Methodology for Ranking of Technology Insertion (TI) Candidates for Operating and Support Cost Reduction (OSCR) referenced above. The differences however are basically two. First, it contains elaborate software for the accumulation of data and generation of reports. And second, it has been designed open-ended. When the framework for the model was set up, it was designed to be much larger than preliminary analysis requires. The developer has stated that MICOM plans further development into a full PC economic analysis tool for OSCR.

3. OSCR PC Tool

Science Applications International Corporation
McLean, Virginia 22103 (1991)

The OSCR PC tool is PC based computer software designed to accumulate standard output data from candidate analysis performed by the MSC's and to produce standardized results for presentation to Army officials and high level decision makers. Charts, graphs, cost data, and accounting methodology have been designed into the software to produce a product which is succinct, reliable, and easy to understand.

OPERATING AND SUPPORT COST REDUCTION (OSCR)

4. Cost Modeling Research USAMC Materiel Readiness Activity

Mr. L.H. Adkins and the staff of MRSA have made significant contributions to modeling, especially when certain simplistic assumptions cannot be made. MRSA models, for instance, are designed to use standardized Army data through established reporting systems. The data required for candidate analysis may not be available at the MSC level. Most models that have been developed totally ignore Level of Repair Analysis. Due to the fact that many OSCRs are materiel changes or engineering changes which affect level of repair, the cost estimates made ignoring LORA may be biased. Mr. Adkins has proposed fixups using mathematical algorithms, as well as developing the groundwork for a LORA based OSCR model.

C. Other Resources

Videotape

The TRADOC Perspective for Operating and Support Cost Reduction, VHS, Color, (1991).

This 28 minute videotape produced by the U.S. Army Combined Arms Support Command, Ft. Lee, VA stresses TRADOC's role in the OSCR process. The first eight minutes deal with OSCR and how the responsibility for the program is split between TRADOC and AMC. The remaining twenty minutes are used to present a discussion of a specific TRADOC OSCR concept called "Best in Class".